Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) An air-cooled turbine blade, the blade having an airfoil shape defined by a convex suction side wall, a concave pressure side wall, a leading edge, a trailing edge, a root and a tip, the walls, edges, root and tip forming an interior for receiving blade cooling circuits; the turbine blade comprising:

a plurality of independent cooling circuits within said interior, one of said cooling circuits being positioned to cool said pressure side wall and one other of said cooling circuits being positioned to cool said suction side wall; ~~and~~

wherein said pressure side wall cooling circuit comprises a serpentine passage having a plurality of pin fins and a turning vane;

wherein said plurality of cooling circuits comprises two of said cooling circuits positioned to cool said suction side wall, one closer to said leading edge and one closer to said trailing edge; and

wherein said suction side wall cooling circuit closer to said trailing edge comprises a serpentine portion and a pin bank portion, said pin bank portion having a plurality of tear drop slots forming trailing edge air flow dividers for cooling said trailing edge.

2. (original) The turbine blade recited in Claim 1 wherein said plurality of cooling circuits comprises respective individual air inlets.

3. (original) The turbine blade recited in Claim 1 wherein said plurality of cooling circuits are mechanically interconnected to one another.

4. (canceled)

5. (previously presented) The turbine blade recited in Claim 1 wherein said plurality of cooling circuits comprises a cooling circuit positioned substantially in the center of said interior.

6. (previously presented) The turbine blade recited in Claim 5 wherein said cooling circuit positioned substantially at the center of said interior comprises walls having a greater thickness than the walls of said pressure side and suction side cooling circuits.

7. (canceled)

8. (currently amended) The turbine blade recited in ~~Claim 4~~ Claim 1 wherein said suction side cooling circuit closer to the leading edge comprises a plenum positioned adjacent said tip for cooling said tip.

9. (canceled)

10. (currently amended) The turbine blade recited in ~~Claim 9~~ Claim 1 wherein said pin bank portion comprises a plurality of pin fins, said tear drop slots having two said pin fins between adjacent slots.

11. (currently amended) The turbine blade recited in ~~Claim 9~~ Claim 1 wherein said pin bank portion comprises a trailing edge tip flag having tip strip turbulators positioned adjacent said blade tip.

12. (previously presented) The turbine blade recited in Claim 1 wherein said pressure side wall cooling circuit comprises a super charger channel bypassing said serpentine passage.

13. (currently amended)An air-cooled turbine blade, the blade having an airfoil shape defined by a convex suction side wall, a concave pressure side wall, a leading edge, a trailing edge, a root and a tip, the walls, edges, root and tip forming an interior for receiving blade cooling circuits; the turbine blade comprising:

a plurality of independent cooling circuits within said interior, one of said cooling circuits being positioned to cool said pressure side wall and one other of said cooling circuits being positioned to cool said suction side wall;

wherein said plurality of cooling circuits are mechanically interconnected to one another; and

wherein two of said cooling circuits are positioned to cool said suction side wall, one closer to the leading edge and one closer to the trailing edge; ~~and~~

wherein one of said plurality of cooling circuits is positioned substantially in the center of said interior; and

wherein said suction side wall cooling circuit closer to said trailing edge comprises a serpentine portion and a pin bank portion, said pin bank portion having a plurality of tear drop slots forming trailing edge air flow dividers for cooling said trailing edge.

14. (previously presented) The turbine blade recited in Claim 13 wherein said cooling circuit positioned substantially at the center of said interior comprises walls having a greater thickness than the walls of said pressure side and suction side cooling circuits.

15. (previously presented) The turbine blade recited in Claim 13 wherein said pressure side wall cooling circuit comprises a serpentine passage having a plurality of pin fins and a turning vane.

16. (original) The turbine blade recited in Claim 13 wherein said suction side cooling circuit closer to the leading edge comprises a plenum positioned adjacent said tip for cooling said tip.

17. (canceled)

18. (currently amended) The turbine blade recited in ~~Claim 17~~ Claim 13 wherein said pin bank portion comprises a plurality of pin fins, said tear drop slots having two said pin fins between adjacent slots.

19. (currently amended) The turbine blade recited in ~~Claim 17~~ Claim 13 wherein said pin bank portion comprises a trailing edge tip flag having tip strip turbulators positioned adjacent said blade tip.

20. (previously presented) The turbine blade recited in Claim 15 wherein said pressure side wall cooling circuit comprises a super charger channel bypassing said serpentine passage.

21. (previously presented) An air-cooled turbine blade, the blade having an airfoil shape defined by a convex suction side wall, a concave pressure side wall, a leading edge, a trailing edge, a root and a tip, the walls, edges, root and tip forming an interior for receiving blade cooling circuits; the turbine blade comprising:

a plurality of independent cooling circuits within said interior, one of said cooling circuits being positioned to cool said pressure side wall and one other of said cooling circuits being positioned to cool said suction side wall;

wherein said plurality of cooling circuits are mechanically interconnected to one another; and

wherein two of said cooling circuits are positioned to cool said suction side wall, one closer to the leading edge and one closer to the trailing edge;

wherein one of said plurality of cooling circuits is positioned substantially in the center of said interior and has walls having a greater thickness than the walls of said pressure side and suction side cooling circuits;

said pressure side wall cooling circuit having a serpentine passage, said passage having a plurality of pin fins and a turning vane;

said suction side cooling circuit closer to the leading edge having a plenum positioned adjacent said tip for cooling said tip;

said suction side wall cooling circuit closer to said trailing edge having a serpentine portion and a pin bank portion, said pin bank portion having a plurality of tear drop slots forming trailing edge air flow dividers for cooling said trailing edge.

22. (original) The turbine blade recited in Claim 21 wherein said pin bank comprises a plurality of pin fins, said tear drop slots having two said pin fins between adjacent slots.

23. (original) The turbine blade recited in Claim 21 wherein said pin bank portion comprises a trailing edge tip flag having tip strip turbulators positioned adjacent said blade tip.

24. (previously presented) The turbine blade recited in Claim 21 wherein said pressure side wall cooling circuit comprises a super charger channel bypassing said serpentine passage.

25. (currently amended)A method for improving the cooling effectiveness of an air-cooled turbine blade, the blade having an airfoil shape defined by a convex suction side wall, a concave pressure side wall, a leading edge, a trailing edge, a root and a tip, the walls, edges, root and tip forming an interior for receiving blade cooling circuits; the method comprising the steps of:

providing a plurality of independent cooling circuits within said interior;

positioning one of said cooling ~~units~~ circuits substantially in the center of the interior;

providing said center-positioned cooling circuit with thicker walls than the walls of the remaining cooling circuits; ~~and~~

injecting cooling air into each said cooling circuit through respective independent air inlets;

positioning one of said cooling circuits adjacent said leading edge;

forming said leading edge adjacent said cooling circuit to have a plenum positioned for cooling said tip; and

reusing cooling air after it cools said plenum.

26. (previously presented) The method recited in Claim 25 further comprising the steps of:

positioning one of said cooling circuits adjacent said suction side wall; and

positioning one of said cooling circuits adjacent said pressure sidewall.

27. (canceled)

28. (canceled)

29. (previously presented) The method recited in Claim 26 further comprising the step of:

forming said pressure side adjacent cooling circuit with a serpentine passage having a plurality of pins and a turning vane.

30. (canceled)

31. (canceled)

32. (previously presented) The method recited in Claim 26 further comprising the step of forming said suction side adjacent said cooling circuit to have an out of plane serpentine bend.

33. (previously presented) The method recited in claim 29 further comprising the step of optimizing the configuration of said plurality of pins to maximize heat transfer and optimizing the configuration of said turning vane to minimize flow separation.

34. (currently amended) An air-cooled turbine blade, the blade having an airfoil shape defined by a convex suction side wall, a concave pressure side wall, a leading edge, a trailing edge, a root and a tip, with the walls, edges, root and tip forming an interior for receiving blade cooling circuits; the turbine blade comprising:

a plurality of independent cooling circuits within said interior, a first of said cooling circuits being positioned to cool said pressure side wall, a second of said cooling circuits being positioned to cool said suction side wall, and a third of said cooling circuits positioned substantially in the center of said interior; ~~and~~

wherein said cooling circuit positioned substantially at the center of said interior comprises walls having a greater thickness than the walls of said pressure side and suction side cooling circuits;

wherein said plurality of cooling circuits comprises two of said cooling circuits positioned to cool said suction side wall, one closer to said leading edge and one closer to said trailing edge; and

wherein said suction side wall cooling circuit closer to said trailing edge comprises a serpentine portion and a pin bank portion, said pin bank portion having a plurality of tear drop slots forming trailing edge air flow dividers for cooling said trailing edge.

35. (previously presented) The turbine blade recited in Claim 34 wherein said plurality of cooling circuits comprises respective individual air inlets.

36. (previously presented) The turbine blade recited in Claim 34 wherein said plurality of cooling circuits are mechanically interconnected to one another.

37. (canceled)

38. (previously presented) The turbine blade recited in Claim 34 wherein said pressure side wall cooling circuit comprises a serpentine passage having a plurality of pin fins and one turning vane.

39. (previously presented) The turbine blade recited in Claim 34 wherein said suction side cooling circuit closer to the leading edge comprises a plenum positioned adjacent said tip for cooling said tip.

40. (canceled)

41. (currently amended) The turbine blade recited in ~~Claim 40~~ Claim 34 wherein said pin bank portion comprises a plurality of pin fins, said tear drop slots having two said pin fins between adjacent slots.

42. (currently amended) The turbine blade recited in ~~Claim 40~~ Claim 34 wherein said pin bank portion comprises a trailing edge tip flag having tip strip turbulators positioned adjacent said blade tip.

43. (previously presented) The turbine blade recited in Claim 38 wherein said pressure side wall cooling circuit comprises a super charger channel bypassing said serpentine passage.

44. (currently amended) A method for improving the cooling effectiveness of an air-cooled turbine blade, the blade having an airfoil shape defined by a convex suction side wall, a concave pressure side wall, a leading edge, a trailing edge, a root and a tip, the walls, edges, root and tip forming an interior for receiving blade cooling circuits; the method comprising the steps of:

providing a plurality of independent cooling circuits within said interior;

wherein one of said cooling circuits comprises a serpentine passage having a plurality of pins and a turning vane; ~~and~~

injecting cooling air into each said cooling circuit through respective independent air inlets;

positioning one of said cooling circuits adjacent said leading edge;

forming said leading edge adjacent said cooling circuit to have a plenum positioned for cooling said tip; and

reusing cooling air after it cools said plenum.

45. (previously presented) The method recited in Claim 44 further comprising the steps of:

positioning one of said cooling circuits adjacent said suction side wall; and

positioning one of said cooling circuits adjacent said pressure side wall.

46. (previously presented) The method recited in Claim 44 further comprising the step of :

positioning one of said cooling circuits substantially in the center of said interior.

47. (previously presented) The method recited in Claim 46 further comprising the step of:

providing said center-positioned cooling circuit with thicker walls than the walls of the remaining cooling circuits.

48. (previously presented) The method recited in Claim 45 further comprising the step of:

forming said pressure side adjacent cooling circuit with a serpentine passage having a plurality of pins and a turning vane.

49. (canceled)

50. (canceled)

51. (previously presented) The method recited in Claim 45 further comprising the step of forming said suction side adjacent cooling circuit to have an out of plane serpentine bend.